

REMARKS

A. 35 U.S.C. § 103

1. Hagl et al. and Rehm et al.

a. Claims 1-10, 16-21 and 28

Claims 1-10, 16-21 and 28 were rejected under 35 U.S.C. §103 as being obvious in view of Hagl et al. and Rehm et al. Applicants traverse this rejection. In particular, claim 1 recites a method for serial data transmission that includes “always transmitting further data, whose processing is not time-critical, immediately following said transmitting said up-to-date position data.” The Office Action has conceded that Hagl et al. does not disclose “transmitting further data, whose processing is not time-critical, immediately following said transmitting said up-to-date position data.” This language omits the word “always” as recited in claim 1. Applicants will assume that the Office Action meant to include the word “always.” The Office Action relies on Rehm et al. for overcoming the deficiencies of Hagl et al. In particular, the Office Action asserts that Rehm et al.’s data accommodated in the intervals FZI and corresponding to processes R10-R13 is non-time critical data that immediately follows the time critical data of processes RZ1 and RZ2. However, Rehm et al. only describes the sectoring of processing time so that data associated with time critical processes is processed during periods RZ1, RZ2 and data associated with non-time critical processes is processed during alternating periods FZI. Rehm et al. is silent whether the data during periods RZ1 and RZ2 regards transmitted up-to-date position data. Since Rehm et al. does not suggest altering Hagl et al. so as to

always transmit “further data, whose processing is not time-critical, immediately following said transmitting said up-to-date position data,” the rejection should be withdrawn.

Note that to further clarify the character of the up-to-date position data, claim 1 has been amended to recite that the up-to-date position data is transmitted from the position measuring system to the processing unit.

The rejection should be withdrawn for that additional reason that it is unclear how Hagl et al. is to be altered in view of Rehm et al. in order to always transmit data that is not time-critical immediately following the transmission of up-to-date position data. Without clarity as to how the two references are to be combined, the rejection is improperly using an “obvious to try” standard which is improper. *Gillette Co. v. S.C. Johnson & Son Inc.*, 919 F.2d 720, 725, 16 USPQ2d 1923, 1928 (Fed. Cir. 1990).

b. Claims 29-35

Claims 29-35 were rejected under 35 U.S.C. §103 as being obvious in view of Hagl et al. and Rehm et al. Applicants traverse this rejection. In particular, claim 29 recites a device for serial data transmission that includes a position measuring system that operates so that further data, whose processing is not time-critical, is always caused to be transmitted following the up-to-date position data. The Office Action has conceded that Hagl et al. does not disclose “transmitting further data, whose processing is not time-critical, immediately following said transmitting said up-to-date position data.” This language is not the same used in claim 29. Applicants will assume that the Office Action was conceding that Hagl et al. did not disclose a device for

serial data transmission that operates so that further data, whose processing is not time-critical, is always caused to be transmitted following the up-to-date position data. Assuming that is the case, the Office Action relies on Rehm et al. for overcoming the deficiencies of Hagl et al. As mentioned above in Section A.1.a, Rehm et al. is silent whether the data during periods RZ1 and RZ2 regards transmitted up-to-date position data. Since Rehm et al. does not suggest altering Hagl et al.'s device so as to operate so that further data, whose processing is not time-critical, is always caused to be transmitted following the up-to-date position data, the rejection should be withdrawn.

Note that to further clarify the character of the position data, claim 29 has been amended to recite that the further data, whose process is not time critical, is transmitted from the position measuring system to the processing unit.

The rejection should be withdrawn for that additional reason that it is unclear how Hagl et al. is to be altered in view of Rehm et al. in order to operate so that further data, whose processing is not time-critical, is always caused to be transmitted following the up-to-date position data. The rejection is improperly using an "obvious to try" standard which is improper.

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c. Claims 36-42 and 44-46

Claims 36-42 and 44-46 were rejected under 35 U.S.C. §103 as being obvious in view of Hagl et al. and Rehm et al. Claim 36 has been amended to clarify that related non-time critical data is transmitted "over several blocks, between which up-to date position data is transmitted."

The Office Action has relied on Rehm et al. for overcoming the deficiencies of Hagl et al. However, as mentioned above in Section A.1.a, Rehm et al. is silent whether the data during periods RZ1 and RZ2 regards transmitted position data, the rejection is improper for reasons similar to those given above in Section A.1.a. Since Rehm et al. does not suggest transmitting related non-time critical data over several blocks between which up-to date position data is transmitted, the rejection should be withdrawn.

The rejection should be withdrawn for the additional reason that an improper “obvious to try” standard is being applied since it is unclear how Hagl et al. is to be altered in view of Rehm et al. in order to transmit related non-time critical data over several blocks between which up-to date position data is transmitted.

Please note that claims 38-42 are being amended to clarify Applicants’ invention and to be consistent with the amendment of claim 36. Accordingly, the amendments are not related to patentability as defined in *Festo Corporation v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd*, 234 F.3d 558, 56 USPQ2d 1865 (Fed. Cir. 2000) (*en banc*), *overruled in part*, 535 U.S. 722 (2002).

d. Claims 47-53 and 55

Claims 47-53 and 55 were rejected under 35 U.S.C. §103 as being obvious in view of Hagl et al. and Rehm et al. Claim 47 has been amended to recite a system for serial data transmission wherein related non-time critical data is transmitted over several blocks, between which the up-to data position data is transmitted. Since the above amendment is similar to that of claim 36, the rejection should be withdrawn for reasons similar to those given above in Section A.1.c.

Please note that claims 47, 50-53 and 55 are being amended to clarify Applicants' invention and to be consistent with the amendment of claim 47. Accordingly, the amendments are not related to patentability as defined in *Festo*.

2. Hagl et al., Rehm et al. and Kurten

Claims 11-15 were rejected under 35 U.S.C. §103 as being obvious in view of Hagl et al., Rehm et al. and Kurten. Claims 11-15 depend directly or indirectly from claim 1. As mentioned above in Section A.1.a, Rehm et al. does not suggest altering Hagl et al. so as to always transmit "further data, whose processing is not time-critical, immediately following said transmitting said up-to-date position data." Kurten does not cure the deficiencies of Hagl et al. and Rehm et al. in that Kurten does not suggest altering Hagl et al. so that Hagl et al. always transmits non-time-critical data immediately after transmission of up-to-date position data. Without such suggestion, the rejection is improper and should be withdrawn.

Claims 11 and 12 are patentable for the additional reason that neither Kurten nor Rehm et al. suggest altering Hagl et al. to immediately transmit after interrupting transmission of non-time-critical data a position data request command to the position measuring system in the place of the non-time-critical data, "whereupon said up-to-date position data are immediately transmitted from said position measuring system to said processing unit." It appears that the Office Action is relying on one or more of the following three passages of Hagl et al. as disclosing the recited transmitting:

can be adapted to these parameters. The position measuring device also has another memory region is used for decoding (Col. 2, ll. 4-5).

According to the invention, commands from the processing unit 400 to the position measuring device 100 are also transmitted

across the data line 500. The commands are taken to a storage 800 of the position measuring device 100, which decodes the command and permits the position measuring device 100 to execute the particular command. This command, in the example, is a data word of three status bits S2, S1 and S0. To assure the transmission of status commands, each status bit is also sent inverted, so that a total of six status bits S2, S1, S0, S2, S1, S0 for one command are transmitted from the processing unit 400 to the position measuring device 100. If the position measuring device 100 recognizes a faulty status bit transfer, an error message is produced. The position measuring device 100 shall be known hereafter as the measuring system.

1. Status Command A

If the data word A is sent from the processing unit 400 to the position measuring device 100 across the data line 500, this means that the measuring device 100 is instructed to send an absolute position measurement value to the processing unit 400. The transmission protocol for this is shown in FIGS. 3-6 and shall be described in detail later on. (Col. 3, ll. 40-54 and 58-64).

The above passages are silent as to immediately transmitting after interrupting transmission of non-time-critical data a position data request command in the place of non-time critical data and immediately transmitting up-to-date position data from the position measuring system and the processing unit. Rehm et al. does not disclose the recited transmitting. Kurten does not cure the deficiencies of Hagl et al. and Rehm et al. since Kurten discloses only the possibility of interrupting a non-time-critical transmission and to complete it later. Since there is no suggestion in either Hagl et al., Rehm et al. or Kurten to provide the claimed transmitting to Hagl et al., the rejection is improper and should be withdrawn.

Claims 14 and 15 are patentable for the additional reason that neither Kurten nor Rehm et al. suggest altering Hagl et al. to transmit after interrupting transmission of non-time-critical data

up-to-date position data in the place of the non-time-critical data. It appears that the Office Action is relying on the same three passages of Hagl et al. presented above that were used to reject claims 11 and 12. The passages are silent as to transmitting after interrupting transmission of non-time-critical data up-to-date data in the place of non-time critical data. Rehm et al. is also silent regarding the recited transmitting. Kurten does not cure the deficiencies of Hagl et al. and Rehm et al. since Kurten discloses only the possibility to interrupt a non-time-critical transmission and to complete it later. Since there is no suggestion in either Hagl et al., Rehm et al. or Kurten to provide the claimed transmitting to Hagl et al., the rejection is improper and should be withdrawn.

3. Hagl et al., Rehm et al. and Lennartsson

Claims 22-24 and 26 were rejected under 35 U.S.C. §103 as being obvious in view of Hagl et al., Rehm et al. and Lennartsson.¹ Claims 22-24 and 26 depend directly or indirectly from claim 1. As mentioned above in Section A.1.a, Rehm et al. does not suggest altering Hagl et al. so as to always transmit “further data, whose processing is not time-critical, immediately following said transmitting said up-to-date position data.” Lennartsson does not cure the deficiencies of Hagl et al. and Rehm et al. in that Lennartsson does not suggest altering Hagl et al. so that Hagl et al. always transmits non-time-critical data immediately after transmission of position data. Without such suggestion, the rejection is improper and should be withdrawn.

The rejections of claims 24 and 26 are improper for the additional reason that neither Hagl et al., Rehm et al. nor Lennartsson suggests altering Hagl et al. to use a first position request command for position control that causes transmission of up-to-date position data to be given highest priority and a second position request command for digitizing a workpiece contour that

¹ The Office Action incorrectly refers to U.S. Patent No. 5,371,859 as Kent, the first name of the

causes transmission of up-to-date position data to be given lower priority. The Office Action has conceded that Hagl et al. does not disclose such position request commands. The Office Action has relied on Lennartsson as solving the deficiencies of Hagl et al. While Lennartsson does disclose transmitting messages with a unique priority it does not disclose nor suggest the particular position request commands recited in claim 24. Since there is no motivation in Lennartsson to alter Hagl et al. to use the claimed position request commands, the rejection should be withdrawn.

4. Hagl et al., Rehm et al., Kurten and Lennartsson

Claims 25 and 27 were rejected under 35 U.S.C. §103 as being obvious in view of Hagl et al., Rehm et al., Kurten and Lennartsson. Claims 25 and 27 depend directly or indirectly from claim 1. As mentioned above in Section A.1.a, Rehm et al. does not disclose nor suggest altering Hagl et al. to always transmit non time-critical data immediately after transmission of position data. Neither Kurten nor Lennartsson cure the deficiencies of Hagl et al. in that both do not suggest altering Hagl et al. to always transmit non time-critical data immediately after transmission of position data. Without such suggestion, the rejection is improper and should be withdrawn.

5. Hagl et al., Rehm et al. and '103 Hagl et al.

a. Claim 43

Claims 43 was rejected under 35 U.S.C. §103 as being obvious in view of Hagl et al., Rehm et al. and U.S. Patent No. 5,687,103 to Hagl et al. (hereinafter '103 Hagl et al.). Claim 43 depends directly on claim 36. As mentioned above in Section A.1.c, Rehm et al. does not disclose nor suggest altering Hagl et al. so that related non-time critical data is transmitted "over several

inventor, instead of Lennartsson, the last name of the inventor.

blocks, between which up-to data position data is transmitted.” ‘103 Hagl et al. does not cure the deficiencies of Hagl et al. and Rehm et al. in that it does not suggest altering Hagl et al. so that related non-time critical data is transmitted “over several blocks, between which up-to data position data is transmitted.” Without such suggestion, the rejection is improper and should be withdrawn.

Please note that claim 43 is being amended to clarify Applicants’ invention and to be consistent with the amendment of claim 36. Accordingly, the amendments are not related to patentability as defined in *Festo*.

b. Claim 54

Claims 54 was rejected under 35 U.S.C. §103 as being obvious in view of Hagl et al., Rehm et al. and ‘103 Hagl et al.. Claim 54 depends directly on claim 47. As mentioned above in Section A.1.d, Rehm et al. does not disclose nor suggest altering Hagl et al. to transmit related non-time critical data over several blocks, wherein the up-to-date position data is transmitted between the blocks of related non-time critical data. ‘103 Hagl et al. does not cure the deficiencies of Hagl et al. in that it does not suggest altering Hagl et al. so that related non-time critical data is transmitted “over several blocks, between which up-to data position data is transmitted.” Without such suggestion, the rejection is improper and should be withdrawn.

Please note that claim 54 is being amended to clarify Applicants’ invention and to be consistent with the amendment of claim 47. Accordingly, the amendments are not related to patentability as defined in *Festo*.

CONCLUSION

In view of the arguments above, Applicants respectfully submit that all of the pending claims 1-36, 38-45, 47, 48 and 50-55 are in condition for allowance and seek an early allowance thereof. If for any reason, the Examiner is unable to allow the application in the next Office Action and believes that an interview would be helpful to resolve any remaining issues, he is respectfully requested to contact the undersigned attorneys at (312) 321-4200.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "John C. Freeman", is written over a horizontal line.

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